EXHIBIT 23

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Page 1

IN THE UNITED STATES BANKRUPTCY COURT FOR THE DISTRICT OF DELAWARE

CHAPTER 11

IN RE:

W.R. GRACE & CO., et al.,

Debtors.

Case No. 01-1139 (JFK)

DEPOSITION OF:

Jennifer L. Biggs

Monday, November 5, 2007

Washington, D.C.

Lead: David Bernick, Esquire

Firm: Kirkland & Ellis, LLP

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		Page 58
1	two models that it uses. One is an	
2	insurance model. The other is a	
3	defendant the defendant insured's model,	
4	fair?	
5	A Correct.	
6	Q Okay. All I am saying is, if	
7	we wanted to go look for those models and	
8	find them described, is there any	
9	publication or piece of paper that is made	
10	available publicly that describes exactly	
11	how those models work?	
12	A The paper that we have been	
13	referring to provides quite a bit of detail	
14	regarding the insurance model. There is	
15	not a separate article that talks	
16	specifically to our defendant model; but	
17	some of the process and method that is used	
18	to estimate the liabilities of an	
19	individual defendant are described within	
20	the paper that we have been talking about.	
21	Q Okay. I think I understand the	
22	answer to that question.	

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		Page 64
1	intellectual capital, some of the specific	
2	assumptions and how we developed those	
3	assumptions, that is proprietary, yes.	
4	Q And in terms of the	
5	peer-reviewed paper, the only peer-reviewed	
6	paper that you have identified so far	
7	that unless you are going to tell me	
8	about the only peer-reviewed paper you	
9	have identified so far that relates to	
10	those models is the Cross paper published	
11	in '97, correct?	
12	A That's the only paper that	
13	deals specifically with the model. But	
14	there are other there is other	
15	peer-reviewed information that feeds into	
16	the model.	
17	For example, we rely on	
18	assumptions relating to run-off patterns	
19	that were developed by Professor Stallard,	
20	and his work was peer-reviewed as part of	
21	the Manville proceedings back in 1993 and	
22	1994.	

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		Page 65
1	So different assumptions that	
2	we rely on could be peer-reviewed or	
3	published in other places.	
4	Q Is there any other is there	
5	any assumption that's in the model beyond	
6	Mr. Stallard Dr. Stallard's run-off	
7	assumption that has been peer-reviewed?	
8	A Not that is occurring to me	
9	right now.	
10	Q You said that there is a	
11	difference between the underlying there	
12	is a difference between the estimation of	
13	the insureds' asbestos liability as it's	
14	treated in the two models that is, the	
15	defense model versus and the insurance	
16	model because of information	
17	constraints.	
18	What did you mean by	
19	information constraints?	
20	A When we do work for an	
21	insurance company or a reinsurance company,	
22	we are typically looking at the experience	

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		Page 74
1	made available publicly, that is,	
2	published, an estimate for liability of a	
3	specific defendant company?	
4	A I am not sure what was	
5	published with regard to the liabilities of	
6	the early bankruptcies that I mentioned	
7	earlier such as Pay Corp.	
8	In terms of liability estimates	
9	for other individual defendants, I'm not	
10	aware of any.	
11	Q Okay. I take it that the	
12	answer would this is pretty	
13	self-evident, but there has not been a	
14	defendant-specific asbestos liability	
15	estimate by Tillinghast that has been	
16	published in a peer-reviewed journal,	
17	correct?	
18	A A specific estimate in a	
19	peer-reviewed journal, no.	
20	Q Okay. The expert report that	
21	you did for Delta American Re, that expert	
22	report and your testimony, did that reveal	

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		Page	117
1	estima	ating is, you are estimating the	
2	preser	ntation of claims that are their	
3	freque	ency, their value, their payment?	
4	Α	That's right.	
5	Q	Okay. And so those are	
6	behavi	riors; are they not?	l
7	Α	And I evaluate them in	-
8	aggreg	gate, and I think I was perhaps	
9	misinte	erpreting your question in terms of	
10	individu	lual behaviors.	
11	Q	But those are the behaviors	
12	those	are behaviors; are they not?	
13	Α	That claims are filed.	ĺ
14	Q	And settled.	
15	Α	They represent the behavior or	
16	actions	s of the parties involved.	
17	Q	Right. And there are many,	
18	many (different factors that relate to those	
19	behavi	iors; are there not?	
20	Α	Yes.	
21	Q	There are the behaviors of	
22	lawyer	rs in different parts of the country.	

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		Page 118
1	There are the behaviors of the courts in	
2	administering the claims and setting	
3	standards for the claims. There are	
4	behaviors of the companies that are	
5	litigating or settling the claims.	
6	Correct?	
7	A Those would be included, yes.	
8	Q And there are causes of all of	
9	those behaviors; are there not?	
10	A Yes.	
11	Q And all I'm saying is:	
12	Have you done an expert	
13	analysis at any point in time that	
14	specifically and quantitatively identifies	
15	the causes of any of those behaviors?	
16	A No.	
17	Q Whose job is it in estimation	
18	to do that?	
19	A It's not necessary for	
20	estimation.	
21	Q Well, fair enough. That's	
22	something that estimation doesn't purport	

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		Page 119
1	to do?	J
2	A It's not necessary. What I am	
3	trying to estimate is the resulting	
4	effects, not the cause of it.	
5	Q But we all know that, if	
6	something happens in the future, the	
7	changes in the environment, that can have	
8	effect on claims-filing and settlement,	
9	right?	
10	MR. MULLADY: Objection.	
11	Vague.	
12	Q Well, your counsel has said	
13	that's vague. Let's go back.	
14	If we take a look at the	
15	history of asbestos claims filing and	
16	resolution, that is a history where there	
17	have been huge changes that affected	
18	dramatically the trends of claim filing and	
19	resolution, correct?	
20	MR. MULLADY: Objection to the	
21	form.	
22	A There have been many changes	

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		Page 120
1	over the years, yes.	
2	Q And those reflect the fact that	
3	different factors have come into the legal	
4	environment that cause changes in behavior,	
5	correct?	
6	A One of many reasons.	
7	Q Okay. So one of many reasons,	
8	yes? If you just say "one of many	
9	reasons"	
10	A One of many reasons, yes.	
11	Q So, now, obviously, if you are	
12	predicting what is going to happen in the	
13	future, the future is going to be subject	
14	to similar changes, right?	
15	A Not necessarily of the same	
16	cause or magnitude.	
17	Q I understand that. That's the	
18	whole issue, isn't it, that, in the future,	
19	we know that there is going to be some	
20	change, correct?	
21	A In something. I don't know	
22	change in what.	

22

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		Page 125
1	radically because a meso claim is not going	
2	to be worth a lot less today than it used	
3	to be worth. It's still worth a lot of	
4	money.	
5	So I am an expert in looking at	
6	claiming behaviors in the aggregate and	
7	making reasonable assumptions to feed into	
8	my model.	
9	So I don't want to say I am not	
10	an expert because I am an expert in making	
11	those estimations, and they incorporate	
12	some of what I believe you are describing.	
13	And when you use the label an	
14	"expert" in this, my expertise is very	
15	broad. So your questions are confusing to	
16	me.	
17	Q Well, I understand that, but	
18	your expertise has a limitation. And all	
19	I'm doing is exploring the limitations of	
20	your expertise.	
21	You can do calculations using	

models, but you have to have assumptions

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		Page 126
1	that drive those models, correct?	
2	A The assumptions are a very	
3	important part of it.	
4	Q And the assumptions that you	
5	were just talking about, the assumptions	
6	that are important to estimating a future	
7	rate of claim filings, are assumptions that	
8	go to how people will act under various	
9	circumstances, correct?	
10	A In the aggregate.	
11	Q In the aggregate?	
12	A Correct.	
13	Q And in the aggregate their	
14	actions under those circumstances would be	
15	a function of a variety of factors,	
16	correct?	
17	A Yes.	
18	Q Okay. And when it comes to how	
19	those what those factors are and how	
20	they will affect claiming behavior, there	
21	are people who are expert in analyzing	
22	marketplace behavior from the point of view	

assumptions?

Grace.

Q

assumptions.

Correct.

Now, when it comes to, for

example, whether propensity to sue is going

to go up or down against a given company,

that is also an area that in your analysis

is an area about which you make

In this case, I make

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assumptions regarding the propensity to sue Right. Now, those assumptions about the propensity to sue Grace, whether they are going to go up or down, are assumptions that don't come to you as a result of any scientist saying, "Here is what is going to happen," correct? A I don't -- I don't get them from an outside expert. Those are my Q Right. And when you say your assumptions, you don't have a quantitative or published methodology on the basis of

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		Page 136
1	differs, yes.	
2	Q Okay. And when it comes to	
3	that litigation environment, you it	
4	would be fair to say I think you just	
5	said it that it's very difficult to	
6	predict how the litigation environment is	
7	actually going to change from year to year.	
8	Would that be fair?	
9	A You might have ideas of certain	
10	reforms that are about to pass or things	
11	like that, but it's difficult to predict	
12	years in advance how the litigation	
13	environment might change, yes.	
14	Q In fact, if you take a look at	
15	Manville, nobody predicted that, when the	
16	Manville Trust opened its doors in the	
17	first instance, that it would be	
18	overwhelmed with claims, correct?	
19	MR. FINCH: Objection.	
20	Foundation.	
21	Q If you know. If you don't	
22	know, just say you don't know.	

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		Page 137
1	A I don't know.	
2	Q No one predicted in the early	
3	'90s that claims would continue to rise	
4	during the mid '90s, correct, against the	
5	industry in general?	
6	A I think some of the work that	
7	Professor Stallard did included different	
8	ranges of estimates against Manville	
9	specifically. I don't know what specific	
10	industry-wide projections regarding	
11	increased claims were in the early '90s.	
12	Q In the late '90s, there was a	
13	very dramatic up-swing in claims	
14	industry-wide, correct?	
15	A Yes.	
16	Q Nobody predicted that; did	
17	they?	
18	A They may have been part of	
19	ranges of estimates.	
20	Q You don't know do you know	
21	that they were?	
22	A I believe in the 1993 and 1994	

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		Page 138
1	work there were many, many scenarios of	
2	possible future claim filings in the	
3	context of the Manville Trust.	
4	Q So it's your testimony that	
5	Mr. Stallard got it right? He predicted	
6	the up-swing in the late 1990s?	
7	MR. MULLADY: Objection.	
8	That's not what she said.	
9	Q Well, there was an up-swing	
10	A I believe he provided a range	
11	of projections. I don't think that that	
12	was what he called his preferred estimate,	
13	but I believe that he explored the	
14	uncertainty and provided a range of	
15	possible outcomes.	
16	Q Right. And then he did a	
17	retrospective view after 2000, and he had	
18	to adjust his model because it turns out	
19	that the world had changed, correct?	
20	A He in his 2001 paper, he	
21	described a way to update his projections	
22	to reflect changes in the propensity to	

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			Page 139
1	sue. T	hat's right.	
2	Q	And he had not foreseen these	
3	change	es at the time he did his original	
4	estima	te, correct?	
5	Α	I don't know what he foresaw.	
6	But his	original preferred estimate of the	
7	numbe	r of claims, the actual subsequent	
8	events,	differed from that.	
9	Q	Okay. And then there was a	
10	very si	gnificant change in filing behavior	
11	agains	t Manville and against other	
12	compa	nies after 2003, correct?	
13	Α	There were changes against	
14	filings a	against Manville as well as other	
15	compar	nies, not necessarily related.	
16	Q	But there were significant	
17	change	es, correct?	
18	Α	There were dramatic decreases	
19	in the n	umber of non-malignant claim	
20	filings.		
21	Q	And nobody predicted those,	
22	correct	!?	

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l			
			Page 140
	1	MR. FINCH: Objection to the	
l	2	form. Foundation.	
l	3	Q In 2003, nobody predicted the	
l	4	drop-off that was going to occur in 2004,	
	5	correct?	
İ	6	A I am not aware of it.	
	7	Q Now, in your estimate, take	
	8	the so we what we have is a series of	
I	9	changes that have taken place in the	
۱	10	litigation environment over the years,	
I	11	fair?	
I	12	A Yes.	
I	13	Q And is it also fair to say that	
	14	people who have done estimates of asbestos	
	15	liability have, with a fair degree of	
	16	consistency, failed to predict those	
	17	changes, true or not?	
	18	A There have been changes in the	
	19	litigation environment that have not been	
	20	predicted ahead of time, true.	
	21	Q Now, Mr Dr. Peterson was	
	22	able to testify that the longest that he	

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		Page 146
1	Q '97 to 2001, and you adjust	
2	it to reflect the Grace in your view has	
3	later dates of first exposure?	
4	A Based on their own claim data.	
5	Q Based on their own claim data.	
6	And subject to that one	
7	adjustment, you assume that the litigation	
8	environment of Grace versus the rest of the	
9	industry otherwise remains constant for the	
10	rest of the projection, correct?	
11	A I think yes, let me try to	
12	answer it with more words. I do	
13	Q If you feel it necessary?	
14	A I do.	
15	I continue to reflect changes	
16	in the industry level of claim filing	
17	beyond Grace's bankruptcy date; but, other	
18	than the adjustments for the differences in	
19	first exposure dates, I assume that Grace's	
20	experience will follow the same general	
21	pattern as what I have assumed for the	
22	industry in total	

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		Page 160
1	and the ratio that comes out of that, the	
2	assumption that it would then remain	
3	constant over a long period of years, with	
4	the exception of the date of first exposure	
5	adjustment, that assumption is an	
6	assumption that you did not test, correct?	
7	MR. FINCH: Objection to the	
8	form.	
9	A I haven't tested it in a	
10	statistical sense because there are not any	
11	statistics to test. I have tested it from	
12	a reasonableness perspective in terms of	
13	what might be likely to happen to Grace	
14	relative to other defendants.	
15	Q Okay. Now, from that	
16	perspective, that is the perspective that	
17	says, "Is Grace's environment vis-a-vis	
18	other defendants going to change or not in	
19	the future," that's an assessment that you	
20	did to see about reasonableness, right?	
21	MR. MULLADY: Objection.	
22	Foundation.	

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			Page 163
1	Α	Correct.	
2	Q	You didn't do any quantitative	
3	test, co	orrect, of your assumption?	
4	Α	Of the future let me just	
5	make s	ure I understand what you are saying.	
6		Of the ratio of future Grace	
7	claims t	that don't exist	
8	Q	That's your statement.	
9	Α	relative well, I don't	
10	underst	and your question then.	
11	Q	Very simple.	
12		You took a ratio that was	
13	derived	from an historical period of time.	
14	You as	sumed it was going to remain the	
15	same.	That assumption you did not test	
16	statisti	cally.	
17		You have just testified to	
18	that, rig	ght?	
19	Α	The basis for the assumption is	
20	tested s	statistically based on historical	
21	informa	tion.	
22	Q	The assumption that the	

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		Page 164
1	propensity would remain the same in the	_
2	future from 2001 going forward would remain	
3	the same, that is an assumption, correct or	
4	not?	
5	A That's an assumption.	
6	Q Okay. And it wasn't tested by	
7	you, correct or not?	
8	A To the extent I've looked at	
9	the stability of the historical ratio, that	
10	is a test of the validity of that	
11	assumption in the future.	
12	In terms of other tests that	
13	you seem to be implying that I should have	
14	done, I don't even know what you are	
15	suggesting; but based on all of the data	
16	that is available, I performed reasonable	
17	tests to support the assumption.	
18	Q Okay. Okay. The only thing	
19	that you have now referred to is tests to	
20	the history, right?	
21	You said that you looked at	
22	tests going back?	

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		Page 166
1	the '97, '98 time frame, '99 time frame.	
2	Grace had entered into a	
3	moratorium agreement, so their level of	
4	filings during those years was suppressed.	
5	If I look at their ratio relative to the	
6	industry, I see that it looks low in the	
7	years that there are moratoriums.	
8	So I am able to interpret that	
9	data. I am able to understand what caused	
10	their relationship relative to the industry	
11	to change during different time frames.	
12	And the purpose of this whole	
13	calibration period is to look at the years	
14	and the time frame that will be most	
15	relevant for selecting Grace's ratio	1
16	relative to the industry on a going-forward	
17	basis. And I think I have done adequate	
18	tests to make that assumption.	
19	Q What you have now said is that	
20	you looked at historically to the	
21	propensity to given periods. Then you made	
22	a judgment about which one would be	

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		Page 167
1	reasonable to be used on a going-forward	
2	basis; is that right?	
3	MR. MULLADY: Objection.	
4	Misstates the testimony.	
5	Q Is that right or not,	
6	Ms. Biggs?	
7	A I have made a well-grounded	
8	assumption.	
9	MR. MULLADY: Can we take a	
10	short break.	
11	MR. BERNICK: No, I want to ask	
12	a few more questions. Then I will be	
13	five or ten minutes. I actually just	
14	want to finish this up.	
15	MR. MULLADY: We are going to	
16	stop soon.	
17	MR. BERNICK: You can stop	
18	anytime you want, Ray.	
19	MR. MULLADY: Well, I just	
20	asked you if we could stop and you	
21	said you wanted to ask five more	
22	minutes of questions.	

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		Page 190
1	A And to make adjustments if you	
2	need to.	
3	Q If you have the ability to	
4	determine what the subsequent experience	
5	is, with respect to a given estimate, is it	
6	required or important, either one, under	
7	actuarial standards to test that estimate	
8	and see whether it was accurate or not?	
9	A I think it would be a best	
10	practice.	
11	Q Okay. Now, have you actually	
12	tested any of your any company-specific	
13	estimate that Tillinghast has done to see	
14	whether over time it was accurate or not?	
15	A I have compared some estimates,	
16	how they have changed over time.	
17	Q Is any are any of those	
18	comparisons publicly available?	
19	A Not that I'm aware of.	
20	Q Have you tested whether have	
21	you found any estimate that turned out to	
22	be still accurate five years later, going	

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			Page 191
1	out tha	at far?	
2	Α	By "still accurate" can you	
3	define	what that would mean, because I	
4	typicall	y provide a range of estimates.	
5	Q	Yes, within the range of	
6	estima	tes.	
7	Α	So within the range five years	
8	later?		
9	Q	Yes.	
10	Α	Certainly, some of them have	
11	been, y	es.	
12	Q	Ten years?	
13	Α	I am not aware of comparisons	
14	where v	we have looked at the same book of	
15	busines	ss ten years apart to make the	
16	compa	rison.	•
17	Q	Now, in the case of in the	
18	case o	f strike that.	
19		In the case of the asbestos	
20	liability	y estimates, I think that's where I	
21	have	- I started out. Strike that.	
22		I want to go you are talking	

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		Page 195
1	when it comes to claiming behavior. And he	
2	refers to those as socio-legal or legal	
3	environment.	
4	Are you familiar with that?	
5	MR. MULLADY: Objection to	
6	foundation.	
7	A It sounds familiar. I read his	
8	deposition quickly, so I will should	
9	I you are telling me that's what he	
10	said, right.	
11	Q That's what he said. I am just	
12	asking whether you are familiar with that.	
13	A I thought you were asking me if	
14	that's what he said.	
15	Q No. Are you familiar with his	
16	other the fact that he differentiates	
17	and says, apart from the biological	
18	process, there is a legal environment	
19	process that affects claiming behavior?	
20	Are you familiar with his	
21	statements and writings to that effect?	
22	A I would agree with the premise.	

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			Page 216
1	think a	re going to take place in the legal	
2	environ	nment in the future with regard to	
3	the pro	pensity to sue for mesothelioma?	
4	Α	I have basically predicted that	
5	the envi	ronment will be consistent with	
6	what we	e see today, so I haven't tried to	
7	predict f	future changes in that environment.	
8	Q	With respect to Grace, you have	
9	assume	ed that the environment will be the	
10	same a	s the way it was from '97 to 2001,	
11	correct	?	
12	ı	MR. FINCH: Objection to the	
13	form		
14	Α	No.	
15	Q	In terms of the propensity to	
16	sue, Gr	ace versus the industry?	
17	Α	Maybe that's not what you	
18	asked m	ne.	
19	Q	Well, I'm sorry.	
20	1	With respect to Grace, the	
21	propens	sity to sue Grace versus the	
22	industry	y, you are assuming will be the same	

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		Page 217
1	going forward, the estimate, as it was from	
2	'97 to 2001, correct?	
3	A Other than the changes in the	
4	date of first exposure, I am assuming that	
5	that that Grace's relationship relative	
6	to the industry would remain constant.	
7	Q And in doing so, you did not	
8	perform any scientific analysis of the	
9	factors that would affect the propensity to	
10	sue Grace for mesothelioma, correct?	
11	MR. MULLADY: Objection and	
12	foundation.	
13	A I reviewed the resulting	
14	claims. Inherent within them are all of	
15	those behaviors. I have not studied the	
16	specific behaviors.	
17	Q Okay. But we know that	
18	propensities have changed in the sense that	
19	the result the result in terms of an	
20	aggregate propensity we know that those	
21	have shifted over time, right?	
22	A They have consistently	

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		Page 219
1	I mean, it brought some cases	
2	to trial, but it settled most of its cases.	
3	Q That's true of most companies,	
4	isn't it, they settle most of their cases,	
5	right?	
6	A I believe that's true.	
7	Q But Grace also litigates the	
8	cases, too, right?	
9	A Some of them.	
10	Q Union Carbide litigates cases,	
11	has for the last two or three years,	
12	correct?	
13	A I believe so. I don't follow	
14	that closely.	
15	Q Ask him. He knows about that?	
16	A I don't talk to Ray about that.	
17	Q Union Carbide is solvent,	
18	right?	
19	A Yes.	
20	Q How many other major solvent	
21	defendants are there out there in the tort	
22	system to litigate cases other than	

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		Page 224
1	having trouble focusing.	
2	Q Sure. That's fine.	
3	"Are you aware of any	
4	scientific methodology that is available	
5	for predicting how the legal externalities	
6	are going to evolve with respect to	
7	asbestos claims?"	
8	His answer was: "No."	
9	Would your answer be different?	
10	A I would also answer no.	
11	Q Last question:	
12	"Is there any scientific	
13	methodology that you can think of that	
14	would be capable of predicting changes in	
15	the legal environment for asbestos?"	
16	That's the question that I	
17	asked him?	
18	MR. MULLADY: Page?	
19	MR. BERNICK: This is page 103.	
20	Q "Is there any scientific	
21	methodology that you can even think of that	
22	would be capable of predicting changes in	

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		Page 226
1	method that I think you are looking for,	
2	but it is a scientific way to do it.	
3	Q So your answer to that would be	
4	yes?	
5	A I can think of something. Yes.	
6	Q Okay. But it's supposed to be	
7	scientific methodology. Is that a	
8	scientific methodology?	
9	A I am applying scientific	
10	principles to evaluating past experience	
11	and making a reasoned assumption going	
12	forward. That's a scientific method.	
13	Maybe we define that differently.	
14	Q Okay. Is that within the scope	
15	of your expertise, the method that you just	
16	described for predicting changes in the	
17	legal environment?	
18	A I evaluated the likelihood of	
19	significant changes in the legal	
20	environment relating to meso claims. I	
21	have to I have to make an assumption	
22	regarding how that might or might not	

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		Page 229
1	of a way or a model to use to do that. As	
2	a necessity of making my estimate, I need	
3	to come up with an assumption regarding the	
4	future propensity to sue. And the basis I	
5	used to make that judgment is scientific in	
6	nature.	
7	So in a very technical sense, I	
8	have used the scientific process to make an	
9	assumption. I haven't built a model, and I	
10	don't think I have the expertise to build a	
11	model regarding specific claiming behavior	
12	and how that would change in the future.	
13	But that is different to me	
14	than whether I have the expertise to use	
15	scientific principles to make an informed	
16	judgment and make a necessary judgment	
17	regarding the estimate of future	
18	liabilities.	
19	Q That's a question of selective	
20	judgment, I think your term is?	
21	MR. FINCH: Objection to the	
22	form.	

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1		
		Page 236
1	filed. I just know that they were filed.	
2	And I also know that the rate	
3	has been steadily increasing for many, many	
4	years, and that, based on my understanding	
5	of the environment, there is not a reason	
6	to expect a decrease.	
7	So my model is not a rigorous	
8	regression analysis of specific variables	
9	to affect propensity to sue. I am not	
10	aware of that type of model, and that's not	
11	what I have employed.	
12	Q And then, therefore, when it	
13	comes to the future, you don't have a model	
14	for future propensity. You have a model	
15	for	
16	A I have an assumption for future	
17	propensity to sue, based on the model of	
18	the past.	
19	Q Okay. But you don't have a	
20	model for future propensity to sue. It is	
21	an assumption, correct?	
22	A It is I have a model of the	

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		Page 237
1	future propensity to sue in the industry,	
2	and I have made an assumption regarding	
3	Grace's share of that. So I do have a	
4	model of the future propensity to sue.	
5	Q But you don't have a model of	
6	the future propensity to sue at the company	
7	level, correct?	
8	A I make an assumption that it	
9	will remain at a constant level.	
10	Q That constant level is the	
11	level as which it was existed from '97	
12	to 2001, correct?	
13	A Relative to the industry,	
14	correct.	
15	Q And if you change that	
16	calibration period by even a year, it would	
17	very significantly affect the entire future	
18	projection, correct?	
19	A It could. You could look at	
20	lots of different blocks of years, and you	
21	need to use informed judgment to decide	
22	what is most appropriate. You can't just	

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		Page 244
1	future were unforeseeable. Others, I	
2	think, could be predicted, so I don't want	
3	to just say the totality of it couldn't be	
4	foreseeable. So	
5	Q But the totality certainly	
6	couldn't have been foreseen, correct, in	
7	any given year, the totality	
8	A But material factors that are	
9	part of that could be, so I don't want to	
10	just put it all in a bucket and say we	
11	couldn't tell you about anything. There	
12	are significant parts of it that we could	
13	tell you about it.	
14	Q Would you agree with me that,	
15	in any given year of Grace's history, the	
16	propensity to sue Grace year-by-year or	
17	over a period of many years was in its	
18	totality materially affected by factors	
19	that could not be foreseen?	
20	A I think Grace, as well as other	
21	defendants, were affected by increases in	
22	the propensity to sue for meso that weren't	

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		Page 245
1	foreseen.	
2	Q Now, I want to focus	
3	specifically on your calibration period for	
4	Grace that is from '97 to 2001.	
5	Correct?	
6	A For the number of filings,	
7	correct.	
8	Q Just still talking propensity,	
9	when it comes to the propensity	
10	determination that you made, you used a	
11	calibration period of '97 to 2001. Fair?	
12	A True.	
13	Q Okay. Now, if we went back	
14	over that period of time, that calibration	
15	of time, in fact, there turned out to be	
16	during that calibration period dramatic	
17	volatility in Grace's propensity, correct,	
18	with respect to mesothelioma?	
19	A There were fluctuations in the	
20	ratios that I show of Grace relative to the	
21	industry. And when I see that type of	
22	thing, it's important to me to try to	

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ľ		
		Page 255
1	cause-and-effect factors at a more	
2	individual claimant basis. I just fail to	
3	see how that is very possible, given the	
4	types of data that are available regarding	
5	individual claimants for mesothelioma.	
6	Q Well	
7	A It sounds like a great theory,	
8	but I don't think it's very practical.	
9	Q I see. Are you aware of any	
10	other formal method of scientific analysis	
11	that enables you to identify causal	
12	factors?	
13	A I haven't studied that. That's	
14	not how I do my analysis.	
15	Q Now, when it comes to Grace	
16	specifically, apart from the moratoria,	
17	were there any other factors that you	
18	identified affecting Grace such that they	
19	might change the Grace propensity in	
20	relationship to the industry propensity	
21	during the late during the calibration	
22	period?	

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		Page 256
1	Did I screw that up?	
2	A No. I'm thinking.	
3	Not specifically.	
4	Q How much of the increase or	
5	there was an increase in the propensity	
6	versus the industry during your calibration	
7	period, correct?	
8	A Yes.	
9	Q Okay. So, in fact, if we took	
10	your propensity number, about 58 percent	
11	A For meso.	
12	Q for meso, that number	
13	reflects in part the impact of an increase	
14	in propensity to sue Grace during your	
15	calibration period, correct?	
16	A Ratios of Grace's claims	
17	relative to the industry claims are higher	
18	in 2000 and 2001.	
19	Q Right.	
20	A And some of that increase is	
21	attributable to certain moratorium	
22	agreements expiring. And other reasons for	

		Page 259
1	A That it increased in 2000,	
2	2001.	
3	Q Yes. To that extent, you had	
4	to look you wanted to look for factors	
5	that would account for that increase, that	
6	is, Grace-specific factors, right?	
7	A I wanted to understand	
8	information that would tell me which years	
9	would be most representative of Grace for	
10	the future.	
11	Q Right. And in order to do	
12	that, again, you have to go look back to	
13	what is causing the events to take place.	
14	You want to know if there are going to be	
15	events that are non-recurring or if there	
16	are going to be events that are recurring,	
17	correct?	
18	A I agree.	
19	Q Now, as I understand it, the	
20	only event that you have actually analyzed	
21	that is unique to Grace during that period	
22	of time is the are the moratoria,	

		Page 260
1	correct?	
2	A The moratorium, and the other	
3	specific item that I needed to consider for	
4	the calibration period was what the partial	
5	year of filings represents in terms of the	
6	relationship to the industry. I need to	
7	set them on equal time or volume	
8	considerations in order for the ratio to	
9	make sense.	
10	Q But in terms of changes	
11	affecting the propensity against Grace, the	
12	only	
13	A I didn't identify anything	
14	else. Correct.	
15	Q Okay. Now, with respect to the	
16	moratorium, did you measure from what	
17	you have said well, let me just ask you.	
18	Did the moratorium have the net	
19	effect of increasing the overall average	
20	propensity to sue Grace in the calibration	
21	period? In other words, did the moratoria	
22	affect propensity within the calibration	

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		Page 265
1	Q Okay.	
2	A Because of the effect of the	
3	moratorium.	
4	Q No, the effect of the	
5	moratorium would only affect 1996. Well, I	
6	will rephrase it. What it says, you work	
7	with 1996 back to 1991 before really any of	
8	the moratorium had any kind of effect on	
9	the propensity?	
10	A I haven't looked at that	
11	specific range of years, but one test that	
12	I did do was I looked at the whole period	
13	from '92 to 2001. And I get essentially	
14	the same percentage that I selected by	
15	reaching back that far.	
16	Q You still are then including	
17	the later period of time. What I am trying	
18	to tease out is	
19	A I think the propensity to sue	
20	Grace increased. I think it's important to	
21	use a span of years that are as current and	
22	responsive to the future as possible. But	

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		Page 273
1	moratoria. That's fine.	
2	But I then asked the question,	
3	what about the two years that have the	
4	greatest impact on the calibration period,	
5	which are 2000, 2001.	
6	Do they affect do they	
7	reflect the impact of another factor that	
8	is unique to Grace other than the	
9	moratorium?	
10	That's what I am getting at.	
11	So the question is:	
12	Did you look to see whether a	
13	portion of the increase in propensity in	
14	2000, 2001, was due to factors other than	
15	the moratorium, that is, factors unique to	
16	Grace?	
17	Did you do that?	
18	A I didn't specifically break it	
19	apart in terms of how much is the	
20	moratorium and how much might be other	
21	factors.	
22	Q Fine. Let me ask you a couple	

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		Page 313
1	understanding of the data.	
2	I directly relied on a	
3	selection of '97 to 2001 as being	
4	responsive.	
5	Q Now, if we take a look at the	
6	trend line from '93 through '98, that's a	
7	total of six years. And is it fair to say	
8	that the propensity trend line from '93 to	
9	'98 is consistently down?	
10	A The ratios in each successive	
11	year of Grace relative to the industry are	
12	lower.	
13	Q Then there are two years in	
14	which there is the beginning of a rise, and	
15	then one year in which there is sharp jag	
16	up, correct?	
17	A 1999 increases, and 2000	
18 ·	increases at a greater rate.	
19	Q And are there statistical tests	
20	to use to determine whether the group of	
21	years from '97 from '93 to '98 is	
22	statistically different from the group of	

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		Page 314
1	years, '98 I mean 1999, 2000, and	
2	2001?	
3	A You could use tests to	
4	determine if you felt that the average	
5	during the two time periods was different,	
6	but that wouldn't prove anything.	
7	Q Well, it may not prove	
8	anything, but there are tests that are	
9	available are there not for testing	
10	as a statistical matter whether those two	
11	groups of numbers are significantly	
12	different, correct?	
13	A You could test whether the	
14	averages are different, but the purpose	
15	here is not to show whether they are	
16	different. The purpose is to make an	
17	assumption regarding what is most	
18	representative for the future.	
19	Q Well	
20	A And it doesn't matter if the	
21	two groups are different	
22	Q So	

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		Page 315
1	A to do that.	
2	Q Well, first of all, you didn't	
3	do the test, right?	
4	A I didn't see a need to do that.	
5	Q But you didn't do the test?	
6	A I didn't do the test because I	
7	did not think it was necessary.	
8	Q Fair enough.	
9	So if it turns out that there	
10	is a steep downward trend from '93 to '98,	
11	there is then a change in direction from	
12	1999 and 2000. You then get to the key	
13	question which is:	
14	If those trends are there and	
15	they are statistically significant, down	
16	and then reversal up, you then have to ask	
17	yourself the question, do you not, about	
18	which trend is most probative of the	
19	future, right?	
20	A I didn't try to answer the	
21	question, which trend is representative of	
22	the future. I tried to ask myself: Which	

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		Page 316
1	overall rate is most representative of the	
2	future?	
3	And if I were to follow one	
4	theory that says I should be as responsive	
5	as possible to recent period experience, I	
6	would have only used the data in 2000 and	
7	2001 with the very high level.	
8	But I didn't do that because I	
9	didn't think it was appropriate.	
10	I looked into the underlying	
11	nature of the reasons that the '97, '98,	
12	and 1999 '96, '97, '98, and '99 years	
13	are depressed and selected the overall	
14	calibration period as representative going	
15	forward.	
16	And as long as I understand the	
17	reasons why one group of years is going	
18	down, I don't need to test whether they're	
19	statistically different. I just need to	
20	make an informed judgment as to what I	
21	think is the best rate on a going-forward	
22	basis.	

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		Page 317
1	Q Did you do any tests to	
2	determine did you do any tests to	
3	determine which years from '93 to 2001,	
4	which years were most representative?	
5	A That's a judgment.	
6	Q I understand that. But did you	
7	do a test or statistical or other	
8	quantitative test to kick the tires on your	
9	judgment?	
10	MR. MULLADY: Objection to the	
11	form.	
12	A I used principles of actuarial	
13	science relating to the credibility of	
14	data, stability of data, responsiveness of	
15	the time period. I used those fundamental	
16	principles to make a reasonable assumption.	
17	Q Okay. I have got two more	
18	topics to cover, and then I will be done.	
19	I want to now turn from the	
20	ratio that we have talked about is	
21	propensity. It's a ratio it's a ratio	
22	between claims against Grace and claims	

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		Daga 202
		Page 323
1	And I need to look at things in these	
2	five-year buckets in order to then apply	
3	the run-off from that point forward.	
4	So I needed I had an actual	
5	data point for 2006.	
6	Q Yes.	
7	A And I used that to develop to	
8	'09.	
9	Q Would it be fair to say that	
10	for 2007, 2008, 2009 you made the judgment	
11	or assumption that the rate would be the	
12	same as 2006?	
13	A Yes.	
14	Q And is that a judgment for an	
15	assumption that is the output of a	
16	quantitative analysis, or is that simply a	
17	judgment that you made, you considered to	
18	be reasonable and of service in answering?	
19	A It took into consideration the	
20	expected run-off between the 2005 to 2009	
21	group versus the 2000 to 2004 group from	
22	Professor Stallard's work, both his older	

		Page 338
1	claimants that it settled with?	
2	A I am not aware of that evidence	
3	in this case. No.	
4	Q I take it you were not asked,	
5	as part of your work, to calculate Grace's	
6	several liability at any point in time,	
7	correct?	
8	A I was asked to estimate future	
9	liability, an estimate of what it would	
10	take to monetize its liabilities if it had	
11	continued in the tort system.	
12	Q How much it would have cost	
13	Grace to resolve cases as they came up in	
14	the tort system, right?	
15	A Right.	
16	Q I am just asking you I take	
17	it then the answer to my question is no,	
18	nobody specifically asked you to determine	
19	what Grace's several liability was,	
20	correct?	
21	A But it's even at several	
22	liability could change over time. I'm not	

			Page 340
1	Q	Were you asked to determine	
2	that?		
3	Α	I was asked to determine what	
4	they we	ould have continued to pay, and I	
5	used w	hat they historically settled for as	
6	part of	the basis for that.	
7	Q	What they historically paid,	
8	settled	I for, they paid in order to avoid	
9	not on	ly their share of the liability, but	
10	also jo	int liability, correct?	
11		MR. MULLADY: Objection.	
12	Fou	ndation.	
13	Q	If you know. If you don't	
14	know,	just say you don't know.	
15	Α	I don't know all of the reasons	
16	that the	ey entered into the settlements that	
17	they di	d.	
18	Q	If you want to know what their	
19	share	was we all know how much they	
20	paid	but if you want to know what their	
21	share	was of the total liability, you have	
22	to kno	w how much it paid in the aggregate	

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		Page 342
1	A It employs assumptions, yes.	
2	Q And the assumptions that it	
3	employs I am fiddling because it's	
4	around here someplace is essentially	
5	that there would be a CPI adjustment of	
6	about 3 percent, correct?	
7	A That's one component of what I	
8	call the trend, which is the annual change	
9	in the average costs.	
10	Q Another component was an	
11	assumed reduction of 10 percent for three	
12	years, correct?	
13	A Correct, from 2002 to 2005.	
14	Q And another assumption was that	
15	there would be a 1 percent increase per	
16	year in the settlement demands, just	
17	because settlement demands always go up,	
18	right?	
19	A That there would be a 1 percent	
20	increase in settlement demands following	
21	the three years of 10 percent decreases	
22	hecause in general there is some erosion	

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		Page 343
1	of the reforms that led to these decreases.	
2	Q Finally, there is then an	
3	assumption that settlement demands will	
4	decline to some extent as a result of aging	
5	of the population, correct?	
6	A Correct.	
7	Q Now, is there any model that	
8	led to each one of those assumptions are	
9	those basically assumptions that you used	
10	in making your model?	
11	A Those are assumptions that are	
12	used within the model. There was some	
13	analysis that led to the selection of each	
14	of those assumptions.	
15	Q At the end of the day, though,	
16	when you selected, for example, 10 percent	
17	decline for three years, would that be the	
18	outcome of some statistical analysis, or is	
19	that a judgment on your part?	
20	A It was the outcome of reviewing	
21	experience for large defendants that	
22	remained solvent during the relevant time	

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		Page 344
1	period.	
2	Q Okay. You then have the	
3	assumption that settlement demands will	
4	increase 1 percent forever. Is there a	
5	model?	
6	A Excuse me.	
7	Q You then said I thought you	
8	then said	
9	A For five years.	
10	Q For five years.	
11	Is there a model that told you	
12	that answer, or was that again an	
13	assumption that you made?	
14	A That was a judgment based on	
15	that was more judgmental in nature than the	
16	10 percent decline, partly because we are	
17	talking about the time period into the	
18	future of 2006 to 2010. So there is not	
19	any experience to actually observe in	
20	making that judgment.	
21	But it's consistent with	
22	expectations of what would typically happen	